

# H<sub>2</sub>S GAS ANALYZER

Series 1100 & 1200 | On-line Process Analyzer for GAS/LPG/LNG



## Product Features

- Specific to H<sub>2</sub>S only. No false positives, ever
- Hazardous area / explosion proof (Series 1200)
- Automatic self-zero (no zero gas required)
- Does not suffer from sensor 'zero drift'
- Fast response time
- Accurate and continuous analysis
- Quantitative measurement in PPB, PPM & percent Levels
- Proven reliability
- Conformity to ASTM methods
- Automatic Calibration (optional)
- Long tape life: As few as 4 tape changes per year
- Remote & Web based monitoring/control (optional)
- ATEX, IECEx, CSA certificates available

## Applications

- Gas processing facilities • Natural Gas pipelines • Refineries • Sales gas • Biogas • Landfills • Chemical plants
- Food & beverage plants • Gasses • Liquid Petroleum Gas (LPG) / Liquid Natural Gas (LNG) • Environmental

## Product Description

An H<sub>2</sub>S in Gas Analyzer that is accurate (PPB levels and up), dependable (no "false positives") and low-maintenance has been needed for the petrochemical, gas processing, and gas pipeline industry for quality and process control purposes. With over thirty years of experience in developing and manufacturing H<sub>2</sub>S analyzers and associated parts and supplies, Analytical Systems Keco has met these requirements with the proven microprocessor based H<sub>2</sub>S analyzer. This hydrogen sulfide H<sub>2</sub>S analyzer or monitor provides continuous on-line process analysis based on the specific and interference free ASTM approved tape principle of operation.

The process stream is regulated to 10 PSI by the provided pressure regulator. Then a precision flow meter on the analyzer regulates the sample flow and is humidified. Next, the sample is introduced to the specific lead acetate sensing tape that provides an output proportional to the concentration of H<sub>2</sub>S Analyzer through the photodiode detector and LED light source optical system. This signal is digitized and analyzed by the advanced microprocessor and related software resulting in a linear 4-20Ma output. The LCD display provides the current reading, any alarm condition, procedure prompts (i.e. calibration), and failure indicators. Quality materials are selected for compatibility and are utilized throughout the manufacturing process.

This reliable and field proven H<sub>2</sub>S analyzer system continuously and specifically quantifies the H<sub>2</sub>S levels in the sample with minimal maintenance. The principle of operation is described in various ASTM methods include D4084-82, D4468-85, and D4045-81.

The rateometric-colorimetric tape detector offered by ASI is the only H<sub>2</sub>S detection method that is practically free from cross-interference. The analyzer will not suffer from "false positives" like other H<sub>2</sub>S analyzer methods. Users demand Analytical System Keco's H<sub>2</sub>S analyzer due to its precision and reliability proven by thousands of worldwide installations around the globe.



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# Typical Specifications

## DISPLAY

- Alpha Numeric LCD
- 128 x 64 pixel
- Back-lit display (optional)
- LCD Graph Display w/ month of data (optional)

## TEMPERATURE RANGES

- 1°C to 50°C (operating) without cooling/heating
- 0°C to 70°C (storage)

## ANALOG

- 4-20mA Isolated

## ANALYTICAL PERFORMANCE

- Resolution: 1 ppb
- Accuracy:  $\pm 2\%$
- Repeatability:  $\pm 1\%$
- Linearity:  $\pm 1\%$
- Drift: Nil
- Temp. Coefficient: 0.01% / °C
- Analysis time: 0.75 Second

## DETECTION RANGES

- 0-1 ppm by wt.
- 0-10 ppm by wt.
- 0-50 ppm by wt.
- 0-100 ppm by wt.
- 0-500 ppm by wt.
- Customer specified (contact factory)

## SAMPLING SYSTEM (STANDARD)

- Sample Pressure Regulator
- Sample Flow Meter
- Secondary particulate filter
- Fast sweep (fast loop) needle valve

## ENCLOSURE (CABINET)

- High-impact, industrial strength fiberglass

## WEIGHT/DIMENSIONS

- 50 lbs. w/o options (Series 1200)
- 20 lbs. w/o options (Series 1100)
- 17" W X 19" H X 10" D (Series 1200)
- 14" W X 16" H X 8" D (Series 1100)

## UTILITIES/SETTINGS

- 12VDC, 24VDC, 110VAC or 220VAC
- 5 Watts (without heater option) 10 Watts max
- Carrier Air: (for 501+ ppm ranges only) 130 ml/min
- Sample flow: 0.3 SCFH
- Sample pressure: 10 psig constant
- Calibration gas: H<sub>2</sub>S ~25% of scale balance N<sub>2</sub>, 2L per cal

## AREA CLASSIFICATIONS

- Class 1 Division 1 (Series 1200)
- Class 1 Division 2 (Series 1200)
- Zone 1 or Zone 2 (Series 1200)
- ATEX, IECEx, CSA certificates available
- General purpose/ non-explosion proof (Series 1100)

## AVAILABLE OPTIONS

- Concentration relay alarms
- Diagnostic/fault relay alarms
- Low flow relay alarms
- RS-232/485 Modbus
- Data Logger for data download to PC
- Remote monitoring/control with PC
- Automatic calibration
- H<sub>2</sub>S Scrubber (for vent)
- Cabinet heater & thermostat
- Fugitive Emission Control Unit (for vent)
- ATEX, IECEx, CSA certificates (optional)
- Sample Probe
- Sampling System for gas contaminated with liquids
- Sampling System for LNG/LPG (Vaporizing Regulator)

## Advantages

**No 'false positives'** The only detection method specific to H<sub>2</sub>S only, proven by thousands of applications

**Ultra low-maintenance** Advanced Colorimetric-Rateometric Detector is guaranteed hassle-free for long term operation

**Field-proven operation** The analyzer conforms to ASTM methods & field proven by thousands of global applications

Analytical Systems Keco provides design and application engineering assistance for the User's analyzer requirements. For a quotation, please complete Analyzer Quote Request Form at [www.LiquidGasAnalyzers.com/quote](http://www.LiquidGasAnalyzers.com/quote)